AMENDMENTS TO THE CLAIMS

IN THE CLAIMS:

This Listing of Claims will replace all prior versions, and listings, of claims in the subject Patent Application:

Listing of Claims:

1. **(Currently amended)** A device adapted to be used in a communication system, the communication system using one of OFDM, NBFDM, DMT, FDMA and TDMA, comprising:

a first transceiver unit operable to communicate in continuous bi-directional manner for the direct exchange of information with a second transceiver unit using a common carrier frequency and a common sampling frequency;

means for detecting responsive to a continuous comparison of received and detected signals a comparative offsets between respective common frequency references used for the carrier and sampling frequencies locally by the first and second transceiver units in at least one first signal transmitted by the first transceiver unit and received by the second transceiver unit disposed remotely therefrom; ~~and~~

means for adjusting the common ~~frequency~~ carrier and sampling frequencies in accordance with the offsets detected responsive to the continuous comparison of received and detected signals in at least one second signal to be

transmitted by the second transceiver unit and to be received by the first transceiver unit to correct for ~~an~~ errors in the carrier frequency and sampling frequency references used locally at the first transceiver unit, so that the effects of the offsets to be perceived by the first transceiver unit will be substantially reduced in preemptive manner, the second signal to be transmitted being thereby adjusted to be in substantial frequency lock with the common carrier frequency reference of the first transceiver unit.

2. **(Cancelled).**

3. (Cancelled).

4. **(Currently amended)** A device according to claim 1 ~~2~~, wherein the means for detecting the offsets includes means for performing a correlation on a digital representation of the first signal so as to lock onto the offset in the carrier frequency.

5. **(Currently amended)** A device according to claim1 ~~2~~, wherein the means for adjusting the common ~~frequency~~ frequencies includes ~~a~~ means for digitally shifting data in frequency to be transmitted in accordance with the carrier frequency and the offset corresponding thereto.

6-7. (Cancelled).

8. **(Currently amended)** A device according to claim 1 ~~2~~, wherein the means for detecting the offsets includes means for locking onto the offset in the carrier frequency and for producing an output signal corresponding thereto.

9. **(Currently amended)** A device according to claim 8, wherein the means for adjusting the common ~~frequency~~ frequencies includes means for variably adjusting a reference frequency output by a crystal oscillator in accordance with the output signal generated by the locking means.

10-14. (Cancelled).

15. **(Currently amended)** A method adapted to be used in a communication system, the communication system using one of OFDM, NBFDM, DMT, FDMA and TDMA, ~~the method comprising:~~ wherein the communication system comprises a first transceiver unit operable to communicate in continuous bi-directional manner for the direct exchange of information with a second transceiver unit using a common carrier frequency[[;]] and a common sampling frequency, the method comprising:

detecting responsive to a continuous comparison of received and detected signals a comparative offsets between respective common frequency references used for the carrier and sampling frequencies locally by the first and second transceiver units in at least a first signal transmitted by the first transceiver unit and received by the second transceiver unit disposed remotely therefrom; and,

adjusting the common ~~frequency~~ carrier and sampling frequencies in accordance with the offsets detected responsive to continuous comparison of received and detected signals in at least one second signal to be transmitted by the second transceiver unit and to be received by the first transceiver unit to correct for ~~an~~ errors in the carrier frequency and sampling frequency references used locally at the first transceiver unit, so that the effects of the offsets to be perceived by the first transceiver unit will be substantially reduced in preemptive manner, the second signal to be transmitted being thereby adjusted to be in substantial frequency lock with the common carrier frequency reference of the first transceiver unit.

16. **(Cancelled).**

17. (Cancelled).

18. **(Currently amended)** A method according to claim 15 ~~16~~, wherein the step of detecting the offsets includes performing a correlation on a digital representation of the first signal so as to lock onto the offset in the carrier frequency.

19. **(Currently amended)** A method according to claim 15 ~~16~~, wherein the step of adjusting the common ~~frequency~~ frequencies includes digitally shifting data in frequency to be transmitted in accordance with the carrier frequency and the offset corresponding thereto.

20-21. (Cancelled).

22. **(Currently amended)** A method according to claim 15 ~~16~~, wherein the step of detecting the offsets includes locking onto the offset in the carrier frequency and producing an output signal corresponding thereto.

23. **(Currently amended)** A method according to claim 22, wherein the step of adjusting the common ~~frequency~~ frequencies includes variably adjusting a reference frequency output by a crystal oscillator in accordance with the output signal generated by the locking means.

24-28. (Cancelled).

29. **(Currently amended)** A device adapted to be used in a first transceiver unit that can communicate with a second transceiver unit using a common carrier frequency and a common sampling frequency, the device comprising:

a frequency lock loop and a delay lock loop respectively ~~that is~~ coupled to receive a digital representations of at least one first signal transmitted by the second transceiver unit, the frequency and delay lock loops being adapted to detect a comparative carrier and sampling frequency offsets in the first signal and to produce offset information corresponding thereto indicative of ~~an~~ offsets between respective common frequency references locally used for the carrier and sampling frequencies at the first and second transceiver units; and

a frequency shift block and a timing acquisition unit ~~that is~~ coupled to receive the offset information and digital data to be transmitted by the first transceiver unit in at least one second signal to be received by the second transceiver unit disposed remotely therefrom, the frequency shift block and timing acquisition unit being respectively adapted to digitally shift and sample the digital data in frequency in accordance with the common ~~carrier frequency~~ frequencies and ~~the carrier~~ frequency offsets corresponding thereto to correct for ~~an~~ errors in the carrier and sampling frequency references used locally at the second

transceiver unit, so that the effects of the carrier and sampling frequency offsets to be perceived by the second transceiver unit will be substantially reduced in preemptive manner for continuous wireless bi-directional communication between the first and second transceiver units for the direct exchange of information.

30. (Cancelled).

31. **(Currently amended)** A device adapted to be used in a first transceiver unit that can communicate with a second transceiver unit disposed remotely therefrom using a common carrier frequency and a common sampling frequency, the device comprising:

a frequency lock loop and a delay lock loop respectively ~~that is~~ coupled to receive a digital representations of at least one first signal transmitted by the second transceiver unit, the frequency and delay lock loops being adapted to detect a comparative carrier and sampling frequency offsets in the first signal and to produce ~~an~~ analog offset signals corresponding thereto indicative of ~~an~~ offsets between respective common frequency references locally used for the carrier and sampling frequencies at the first and second transceiver units;

a crystal oscillator that supplies a reference frequency for modulating at least one second signal to be perceived by the second transceiver unit in accordance with the common carrier frequency; and

~~a~~ variably adjustable devices coupled to receive the offset signals ~~and to the crystal oscillator~~, the variably adjustable devices being respectively adapted to adjust the reference frequency of the crystal oscillator and a sampling clock of an analog-to-digital converter in accordance with the offset signals to correct for ~~an~~ errors in the carrier and sampling frequency references used locally at the second transceiver unit, so that the effects of the carrier and sampling frequency offsets in the second signal to be perceived by the second transceiver unit will be substantially reduced in preemptive manner for continuous wireless bi-directional communication between the first and second transceiver units for the direct exchange of information.

32-33. (Cancelled).

34. **(Currently amended)** A device adapted to be used in a communication system, the communication system using one of OFDM, NBFDM, DMT, FDMA and TDMA, the device comprising:

a first transceiver unit operable to communicates in continuous bi-directional manner for the direct exchange of information with a second transceiver unit using a common carrier frequency and a common sampling frequency;

means for detecting responsive to a continuous comparison of received and detected signals ~~a~~ comparative offsets between respective common frequency references used for the carrier and sampling frequencies locally by the first and second transceiver units in at least one first signal transmitted by the first transceiver unit and received by the second transceiver unit disposed remotely therefrom;

means for communicating information corresponding to the detected offsets from the second transceiver unit to the first transceiver unit ; and,

means for adjusting the common ~~frequency~~ carrier and sampling frequencies in accordance with the offsets detected responsive to continuous comparison of received and detected signals in at least one second signal to be transmitted by the first transceiver unit and to be received by the second transceiver unit to correct for ~~an~~ errors in the carrier frequency and sampling frequency references used locally at the second transceiver unit, so that the effects of the offsets to be perceived by the second transceiver unit will be substantially reduced in preemptive manner, the second signal to be transmitted being thereby adjusted to be in substantial frequency lock with the common carrier frequency reference of the second transceiver unit.

35. **(Currently amended)** A device adapted to be used in a communication system, the communication system using one of OFDM, NBFDM, DMT, FDMA and TDMA, the device comprising:

a first transceiver unit operable to communicate in continuous bi-directional manner for the direct exchange of information with a second transceiver unit using a common carrier frequency and a common sampling frequency;

means for detecting responsive to a continuous comparison of received and detected signals a comparative offsets between respective common frequency references used for the carrier and sampling frequencies locally by the first and second transceiver units in at least one first signal transmitted by the first transceiver unit and received by the second transceiver unit disposed remotely therefrom;

means for communicating information corresponding to the detected offsets from the second transceiver unit to the first transceiver unit; and,

means for adjusting the common ~~frequency~~ carrier and sampling frequencies in accordance with the offsets detected responsive to continuous comparison of received and detected signals in at least one second signal to be transmitted by the second transceiver unit and to be received by the first transceiver unit to correct for ~~an~~ errors in the carrier frequency and sampling frequency references used locally at the first transceiver unit, so that the effects of

the offsets to be perceived by the first transceiver unit will be substantially reduced in preemptive manner, the second signal to be transmitted being thereby adjusted to be in substantial frequency lock with the common carrier frequency reference of the first transceiver unit.